Applicant : Mark Chiappetta
Serial No. : 09/921,181
Filed : August 2, 2001
Page : 2

Attorney's Docket No.: 09945-006001
Client's Ref.: CTR-3 (Sonar Scanner)

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 13, line 17 as with the following amended paragraph:

To this end, receiver 16 includes a low-noise pre-amplifier 22 to amplify the received echo signals, a bandpass filter 24 to remove signals outside of the echo frequency range, and a logarithmic demodulated amplifier 26 and gain block 28 to amplify and acquire the envelope of the filtered signals. Analog-to-digital converter (ADC) 30 35 digitizes these signals and provides them to signal processor 18. Comparator 32 receives the analog signals and compares them to predetermined thresholds, as described below. These thresholds may be stored, e.g., in a memory of signal processor 18 and converted to analog form via digital-to-analog converter (DAC) 34 prior to comparison. Results of the comparison are provided to signal processor 18. Alternatively, the function of comparator 32 may be implemented in software running on signal processor 18.

Please replace the paragraph beginning at page 14, line 10 as with the following amended paragraph:

A host interface 36 30 is also connected to signal processor 18. Host interface 36 30 allows a host, e.g., a mobile robot, to receive commands from signal processor 18 that are based on transmitted and received sound waves. For example, an object may be detected, as described below, using sonar scanner 10. Signal processor 18 may then notify the host processor of the object's existence.

Applicant : Mark Chiappetta
Serial No. : 09/921,181
Filed : August 2, 2001
Page : 3

Attorney's Docket No.: 09945-006001
Client's Ref.: CTR-3 (Sonar Scanner)

Please replace the paragraph beginning at page 33, line 5 as with the following amended paragraph:

In process 70, transducer 12 transmits (801) a sound wave towards the two objects, such as objects 72 and 74 shown in Fig. 9. The sound wave may be a signal, such as that shown in Fig. 3. Transducer 12 receives (802) a first echo from the objects and then receives (803) a second echo from the objects. Process 70 detects amplitudes in the first and second echoes and compares (804) the amplitudes in corresponding cycles of the echoes.